2: Schaden--47 E-4,5 (1948-1954) 1962 SM4 Guarani SM4

Chapter IV

Principal Subsistence Activities and Economic Organization

241 433 178 224 [226]

Although the Guaraní is incapable of conceiving human life without the joys of hunting and fishing, the basis of his subsistence is furnished him by tillage. Perhaps because of the influence of environmental conditions and, in part, cultural tradition, some groups of Mbüá, who have large and rich areas of virgin forest at their disposal, such as those of Xapecó, in whose economy hunting, done principally with nooses and traps /Port. mundéus/, greatly prevails over the tasks of the clearings, are still exceptions to this rule. As far as the others are concerned, however, particularly in the present situation, in which the hunting territories of the different villages are being reduced year by year by the progressive invasion of the white man, the importance of the plantings grows more and more, to the detriment of the supplementary activities(1).

[177] [182]

1. /In the original source the notes for Ch. IV appear on pp. 64-65./ But in some villages the ecological situation between the Indians and the civilized ones is becoming such that the former not only cannot support themselves by the activities of hunting, but also do not possess enough land to build their modest little clearings. Take the case of the village of Panambi, where, in spite of the protests of the Serviço de Proteção aos Índios and mine, the Ministério de Agricultura, a few years ago, had the lands of the Kayová divided up to be distributed to colonists sent to the region. On the other side of the border the Guaraní have the misfortune to find themselves in the territory considered very good for the expansion of coffee cultivation. Under the title of "Compra de terras para o cultivo de café no Paraguai /Purchase of lands for the cultivation of coffee in Paraguay/,"

241 433 177 182 648

/53 cont./

263 Many vegetable species are occasionally used in Kayová cooking, such as, for example, a native and uncultivated cará (which is not the cará-do-ar), with a very large bulb.

•224 Hunting and capturing animals are part of the Guaraní's daily activities. I have had the opportunity to observe their importance particularly among the Mbüá of Rio Branco. /54/ Every morning a good part of the men leave home, going into the forest "in order to look at the traps." Each man has four, five, or more traps of snares and sticks /Port. ligara/ in the forest. With snares of flexible branches, pigs, deer, antas, etc. are caught "by the hand" (i.e., by the front leg). The snares for antas are of very thick ropes. To catch macucas and other birds, small snares, lo I, which hold the bird by the leg, are prepared.

223 224 411 177 [192] [178] Since the gun (mboká) has become known -- which, by the way, few possess -- the use of arrows, including the guyrá pïá (an arrow for birds; blunt in order not to get caught in the trees), is becoming more and more rare. As a consequence of the cultural contacts, it is noted that the technique of making bows and arrows, although continuing to have great economic utility for these Mbüá, has ceased to be bound up with hunting in order to assume commercial interest, because there are always buyers interested in native weapons, even though made without care. The hunter, [825] however, goes armed with his gun and, having reached the forest, imitates, by whistles, the voices of the macuca, the jacu, the monkey. To call macucas, incidentally, a whistle of industrial origin, "flute to entice macuca" is used. One can see that the acculturative process has fully struck the most genuinely native economic preoccupations. But since there are few individuals [182] [422] who possess guns, it is obvious that this aspect of economic acculturation is equivalent, in a certain sense, to a cultural disintegration, creating needs without giving the means to satisfy them.

2: Schaden--63 E-4,5 (1946-1954) 1962 SM4 Guarani SM4

/54 cont./

224 [192] When a herd of wild pigs (tadjasú) appears in the vicinity of the village, a collective hunt is organized, in which some four to six persons participate. The distribution of the animals killed, made by whomever killed them, benefits all the great-families of the community. All is divided into equal portions, including that for the hunter, and there are no special parts intended for this one or that one.

226 [361] Similar to what happens in connection with many other aspects of Guaraní culture, the importance of fishing in the assemblage of economic activities varies, as is natural, according to the possibilities and conditions of the environment. Scattered over an immense area, the villages are sometimes found near watercourses rich in fish, sometimes in /55/ regions that offer fish in small quantities, which obviously conditions on a broad scale the interest given to this source of food.

226 184 [192] It is true that there are also differences of an undeniably cultural character. While the Ñandéva of Bananal, for example, limit themselves to catching, with the aid of the weel and rarely with the hook, some river fish -- taray (traíra), bagre, cará -- and while among the Kayová fishing is practically nonexistent, the Mbüá, wherever they are settled, will try to take advantage, as best they can, of the fish available in the watercourses.

226 There are various methods of fishing in vogue among the Mbüá. In the village of Rio Branco, for instance, I noted the existence of weels of taquara cane or of timbópé (used only by the men), of metal hooks (used by preference by the women), of paraí with timbo, and of fishtraps. As for the metal hooks, they claim to have been using them since time immemorial; when they do not have the purchased ones, they make them out of wire, or, when for lambaris, out of sewing needles; lacking purchased lines, they use tucuma fiber. To fish with timbo they build a paraí in the river, cut timbo, put it on a stone and grind it with another one, throwing it in quantity into the water. No timbo is used in the [192] fishtrap; a "chiqueiro" /pen/ is made in the river, with a wooden board that falls ("disarms") when the traíra or other fish moves the

2: Schaden--64 E-4,5 (1948-1954) 1962 SM4 Guarani SM4

/55 cont./

226 bait. Some individuals still fish with the aid of bow and arrow. As for the harpoon and the fishing net, they say that they never used them. The fish are not strung on a cord, but collected in a basket or, lacking that, strung on a little stick provided with a crook. Now and then collective fishing expeditions are organized. [462] [252] [192] If they are far from home, the men fish while the women roast the fish on the spot (mokĩ ẽ), where it is consumed. When nearby, they carry everything to the village, where they share the yield with those who remained behind.

The collective fishing expeditions of the Mbüá of Xapecó last for many months.

421 In spite of the little importance of the economic preoccupations in the tribal culture, one sees quite a keen sense of private property. The researcher trying to acquire for the ethnographic collection some object -- a basket, for example -- that belongs to a child will not obtain it without the latter's consent, even though he perhaps offers by /56/ way of remuneration an implement greatly coveted by the parents. The money received in the street [262] [192] [432] by the children on the occasion of visits to São Paulo or another city belongs to them themselves; they spend it, in general, on wheat bread (mbodjapé), one of their preferred tidbits. On the other hand, in the matter of food for immediate consumption, the individual makes his interest prevail. In São Paulo I once offered [114] a basket with a few dozen bananas to a group of Mbüá; all advanced on the fruit at once, each one matching what he could and immediately concealing the product of his agility under the blankets, traveling bags, or coats scattered around in the corners of the hut where the Indians were staying. This attitude noticeably [224] contrasts with the fairness that these same Mbüá maintain when [178] they distribute the yield from hunting (even individual hunting) in their own village. One sees that in the latter case the ancient institution of the tribal economy is still alive.

/180 cont./

181 In accordance with the essentially mystic orientation of
182 Guaraní culture, the subsistence activities in it are focalized less
179 insistently than religious problems. Even further, in economic work, particularly tillage, there inheres as sacred character, which requires the performance of a cycle of religious ceremonies parallel to the agricultural one. In a general way, the acculturative crisis -- and in this the Guaraní are distinguished from many other native tribes -- is progressively exacerbated through the intensification of the mysticism peculiar to the tribal conception of the world. On the one hand, the importance of the religious ideals in the traditional value system is responsible for the violence of the conflict between the cultures; on the other hand, in the situation of insecurity and poverty stemming from the contacts with foreign people, the Guaraní, instead of developing more rational and positive mental attitudes, reacts on the emotional plane, by means of a more and more intense recrudescence of his mystical experi-
[156] ences. It is a vicious circle, which in the majority of cases results in practically insoluble personality conflicts, principally in the individuals of the male sex whose cultural participation converges more to the nuclear and determinant values of the system, while the women, of more practical sense, are more constantly
[464] /181/ subject to the cares of the economic sphere. The difficulties of the acculturative crisis, by the way, also originate in part from the fact that it is the men, and not the women, who are forced to adopt the economic behavior and regular patterns of work, like the changa /hired labor/ on the fazendas and the yerbales /yerba maté plantations or districts/, in order to earn the money indispensable for the satisfaction of the new needs.

[241] In the groups that live in such conditions that the subsistence
[224] activities can continue to develop according to the ancient norms, tillage predominates in general, in spite of the fact that the techniques of cultivation are rudimentary and the pleasures of hunting excite more interest, the latter, incidentally, the privilege of the
[935] male sex. During the phases of less intense association with foreign groups, quite stable equilibrium is maintained among the different subsistence activities, the dimivellation and impoverishment becoming more marked in proportion to the degree that

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

consuming them without the more strenuous labor of axe work. In most new clearings, a second burning was necessary, and in such cases, the unburned slash was nearly always piled up about fallen trunks or live trees.[a] Planting was done in the spring in the ash-covered, burnt-over ground in the midst of charred and partially consumed trunks and stumps. These impediments caused relatively little difficulty as far as Cayuá planting was concerned because the principal planting implements were a digging stick (*sarakwá*) and possibly some sort of pre-iron, hoe-like implement. Such tools worked well enough in the irregular, trunk-strewn ground, but the crude and untended appearance of the aboriginal *kokwé* (agricultural clearing) caused unfavorable comment both from the Jesuits and from Dr. Rengger, accustomed alike to the smooth, unobstructed European fields where the plow had to pass.

A point of some difficulty to affirm, for lack of actual information on the Cayuá, concerns the sexual division of labor in agriculture. That the men did the heavy work of cutting and burning the fields seems certain enough, and this is also the case today. But today men have a considerable role in the rest of agriculture as well; including the planting, tending, and harvesting of a number of crops. The women are also important at present, and, indeed, apparently indispensable in farming certain crops, notably corn. However, the work of agriculture after the burning of the fields is now by no means exclusive with women. But in early accounts of Coastal Tupi, agriculture, except for cutting and burning, was largely and unmistakably a female province; the man's time was much occupied in hunting and fishing. Besides the comparative data from Tupi-Guarani peoples, we have the fact that a post-Conquest change in the sexual division of labor in agriculture is likely in the Cayuá instance. We have some grounds, therefore, in spite of the lack of documents, in stating that the aboriginal Cayuá had female agriculture.

Somewhat less important to the aboriginal Cayuá than agriculture (but quite important notwithstanding) were hunting and gathering. Agriculture was a seasonal, primarily female, activity, which left the men free for extensive hunting and fishing. Among game animals that the Cayuá esteemed were deer, *paca*, *caitetu* (sometimes *taitetu*), *tapir* or *anta*, *capivara*, and armadilloes. The *paca* is a rodent, the *caitetu* is a wild pig that roams the forests in bands and is considered dangerous quarry because of the numbers in which they usually move, and the *anta* is an ungulate and American relative of the hippopotamus and horse. The armadillo or *tatú* is much smaller quarry and is usually dug out of his burrow. The meat is considered good by the Cayuá, and the shells have long been used for vessels and containers. Several wild varieties of the cat family are also found locally, but the Cayuá did not apparently share the

[a] This process is today known in Brazil as *coivara*, both the name and the practice having been taken over from the aborigines, according to some.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

enthusiasm for this type of flesh attributed to the Abipones by Dobrizhoffer.[43] The *coati* (Tupi word), a little animal related to the raccoon, is killed for food, and monkeys may also have been used. Alligators were probably eaten, although only certain portions such as the tail. Rengger gives us the impression that the aboriginal Cayuá lived at least half from hunting,[45] and this estimate may not be greatly excessive.

A number of birds were killed for food, and toucans, parrots, and parroqueets served both for food and feathers. Parroqueets and sometimes parrots were tamed for pets, and such birds are also today to be found walking about the roofs of some half a dozen houses at Taquapiri. The ostrich-like emu which runs in the open *campo* of the Cayuá region was probably eaten formerly, as it is today, but it is not known whether the eggs were also eaten. Small birds of this species were captured and kept about the settlement to be eaten or for their eggs (?), though it is a moot question whether this keeping of semi-domesticated emu antedates the introduction of the European practice of keeping chickens. Certain other birds were eaten such as the *tapena* (*gavião-tesoura*), but the flesh of others was restricted to the older people, those who had grandchildren; it would make a younger person lazy or cause other undesirable effects. The owl was one such bird.[44]

The bow and arrow was one of the most important weapons of the chase, being employed against most larger and faster game, but special, blunt arrows for birds were also made. Clubs appear to have been used in certain kinds of hunting as well as in war and in personal disputes; in hunting, clubs were used principally against smaller and slower animals. The pellet bow is said not to be aboriginal, but in any case, was early used against birds which perch within its range.

In the matter of fishing, the Cayuá do not seem to have made the use of this source of food that the coastal Tupi did. Métraux comments that "the Cainguá are the only Tupi-Guarani who are so poor in fishing methods; not only do they not possess nets, but they do not shoot fish with the bow and arrow like the majority of Indians of South America."[46] While our information may suffer from insufficient or faulty reporting, it seems likely that Métraux's general impression is correct—at least judging from the present. It would be less safe to say, however, that the Cayuá have always been so poor in fishing practices. At the time of the European entry the Cayuá are practically unreported and may have been better off than now in respect of fishing. In the second place, the retreat of the Cayuá to their present territory, as they sought to avoid contact with the Europeans, confined some of them to an area where fishing is often impracticable because of the lack of fish. Ambrosetti, for ex-

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[43] Dobrizhoffer, 1822, pp. 253 ff. [45] Rengger, 1835, pp. 125–126.
[44] Ambrosetti, 1894, p. 107. [46] Métraux, 1928, p. 92.

3: Watson E-4,5 (1943) 1952 SM4 Guarani SM4

*174 226 ample, speaking of Cayuá farther down the Paraná than Taquapiri, does not give the impression that we would expect from Métraux's statement about the lack of Cayuá fishing.[46]

In any event, the Cayuá practiced fishing at least to a limited extent and knew the techniques of angling, fish poisoning, weir building, and stream damming. It must remain a question for the time being whether the present poverty of fishing techniques is recent or a matter of long standing. It is *174 likely that fishing was somewhat more important in bygone days.

• 224 The trapping of animals, while classifiable as a special form of hunting, was in a certain sense a meeting ground of agricultural and hunting practices. Traps, snares, and deadfalls had to be set to keep animal depredations in the planted crops at a minimum. At the same time, of course, the supply of meat *174 acquired in this manner contributed to the Cayuá larder.

222 [462] Gathering practices, largely the responsibility of the women, played a fairly important secondary part in the food economy of the Cayuá. This was primarily due to the fact that a considerable number of fructiferous trees and bushes grow in the region.[47] Among the wild plants widely used for food by the Cayuá are to be found *gwaimbé* (*Philodendron bipinnatifidum*), *jaboticába* (*Myrciaria cauliflora*), *vacuá* (*Pandanus utilis*, Bory), *gwaBiróBa* (*Mirtaceæ* family), *gwajuBíra* (?), and *araticá* (*Rollinia exalbida*). The use of the heart [252] [171] of the *pindó* palm (*Cocos romanzoffiana*) to make flour as well as shoots for roasting is reported; it is also known to have been a characteristic food practice of some of the non-Guarani-speaking peoples, such as the Mbayá-Caduveo. [273] One modern informant insisted that formerly certain wild fruits were used, at the proper times of the year, to make the all-important *cãuí* or *chicha* beer. (Corn, potatoes, or manioc are traditional ingredients.)

The women also gathered yearly a certain large ant, *ysá*, when it left its house about October. Standing near the mouth of the ant houses with their feet in small, prepared water holes so as not to be bitten, they swept large [252] quantities of the insects into vessels. These would later be roasted, principally for the white fat or oil which was stored in the tail segment of each ant and which was highly esteemed for food. Certain grubs, including one called *tambú* (*Calandra palmarum*) were also eaten.

Another aspect of gathering practices was connected with the several varieties of melliferous bees which live in the Cayuá habitat. Locating hives and the systematic gathering of honey were fairly well developed practices [171] among the aboriginal Cayuá. This trait they doubtless shared with the neighboring Guarani as well as with the little known Guayaki of Paraguay, people who have been characterized as having "a honey culture." There was a

[46] Ambrosetti, 1894, pp. 701, 727 ff.

[137] [47] Apparently an even larger number of such fruit-bearing trees, including many of the same varieties, grew in the environment of the more northerly dwelling Tupi-Guarani.

3:Watson E-4,5 (1943) 1952 SM4 Guaraní SM4

grew up. At the present time, these are supplied partly by motor trucks which link them to the railroad towns. The trucks are usually operated by small, individual owners, whose trade and tradition are closely related to that of the older oxcart drivers. Many more of the latter than truck drivers still traverse the frontier region at present, earning their living by moving merchandise. Both trucks and oxen operate over incredibly crude roads; there are now Chevrolets and Fords where there should be only oxcarts—or perhaps prairie schooners, if such a suitable innovation were to be introduced.

THE *SERVIÇO DE PROTEÇÃO AOS INDIOS*, 1910 TO THE PRESENT

The second decade of the 20th century saw the continuing general increase of white settler population, the growth of a few villages into small towns like Ponta Porã, and the development of limited communications (the railroad) with Brazil's coastal centers. But the major factor justifying setting off one more period between 1850 and the present was the projection and establishment of the SPI. In fact, the establishment of the SPI was a result of the population and development of the interior of Brazil; the Neo-Brazilian had been brought more and more into contact with indigenes who had up to that time escaped the fate of their more coastally living cousins.

The activity of the frontiersman was often unfortunate in its effect upon the native peoples, though doubtless the Neo-Brazilian alleged that primarily it was he who suffered at the hands of the *bugre* (pejorative term for the Indian). The details of frontiersman-Indian relations on such relatively near frontiers as the west of the state of São Paulo diminish not a little the contentions of writers like Gilberto Freyre that the Portuguese colonizers were particularly exempt from the disposition to regard other races as sub-human. Godoi alleges that the Indians living in that region were unacquainted with the difference between bitter and non-poisonous manioc (I). To prevent garden robbing the settlers about Pirassununga allegedly thus conceived the idea of planting the bitter or poisonous variety.[111] Von Ihering, certainly no advocate of sentimental or exceptionally humanitarian treatment of the aborigines, relates that professional Indian hunters or *bugreiros* existed on the frontier. Indiscriminate depredations were carried out by the Neo-Brazilians in reprisal for Indian aggressions, often with little attention to whether the resulting victims were the original perpetrators or even of the same tribe.[112] Actually various islands of Kaingang among the advancing Brazilians maintained markedly hostile relations with the frontiersmen until surprisingly late times (easily into the 1900's)—this east of the Paraná. But the Cayuá were little inclined toward aggressions against the settlers; their activity was probably more of the garden-robbing variety. However, the implication is that they occasionally suffered from the frontiersmen for other than their own acts. It was conditions such as these that called into being a federal agency to deal with the Indians.

[111] Godoi, 1946, p. 26. [112] Von Ihering, 1907.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

*177 412 241 and the axe—the first in particular—to Cayuá agriculture can scarcely be overestimated. It is possible to clear larger pieces of forest at present than formerly, expending both less effort and less time to do so. It is no longer necessary to depend so heavily upon burning and reburning, nor to gather and pile up brush about the trunks of large trees to remove them by fire. With the use of the hoe and machete it is possible to keep crops freer of weeds; a clean *kokwé* is now largely a matter of the industriousness of its owner. Formerly it was much more difficult or technologically impossible to weed frequently.

*177 412 Machetes are the most important metal implement of all, for agriculture and for many other applications. Practically every adult male owns at least one machete, though it is usually a poor one, much diminished by resharpening or breaking of the point. Old machetes are relegated to household use when they become too small for field work (and this must be very small because some men are obliged to continue to use knives worn or broken down to no more than a foot in length). In the household they are used to pull roasted tubers from the fire, in the preparation of food, and the like. The old machetes are also used by the women for short digging implements in getting food from the *kokwé*.

Not everyone owns a hoe or an axe, but axes seem to be the second most [426] [313] essential (and the most expensive) metal implement. Borrowing is usually possible, or the machete is simply made to do instead. Axes are primarily used in fetching and splitting firewood—although a machete will serve up to a point—and in felling the larger trees in the forest for clearing a *kokwé*. Felling the largest trees is very heavy and difficult work and usually impossible with [241] a machete. The hoe is entirely restricted to agriculture, whereas axes and [342] machetes both may be used in housebuilding and honey gathering, and mache- [222] tes are also employed in certain kinds of hunting—usually with dogs—and other activities. The hoe is used in weeding and in opening holes for planting [241] certain crops. Women have more to do with hoes than with either of the other [224] white-introduced tools, which are generally considered implements of male use.

In agriculture, practically the only aboriginal implement remaining today [562] is the digging and planting stick, or *sarakwá*. Corn, especially, is always planted *178 412 with the *sarakwá*, and the implement actually has much to recommend it in the log and stump-strewn *kokwé*. The *sarakwá* is primarily, if not exclusively, an implement of female use. Bamboo knives, aboriginal implements, though [241] possibly not used in agriculture, have fallen into general discard except in [844] their ritual use in severing the natal cord of the newborn infant—an example of conservatism of technology associated with ritual practices.

*177 342 412 Before leaving the subject of metal tools introduced by way of acculturation, mention should be made of the use of the machete in modern house-building. Most obvious is the present wide-spread use of a type of "board" made from large trunks of *taquara* bamboo, split open and flattened in a man-

3: Watson E-4,5 (1943) 1952 SM4 Guarani SM4

Slashing activity preparatory to burning should be completed somewhat in advance of the end of the dry season, preferably by August. The trunks, limbs, and foliage of the cut vegetation will then be partly dried out in order to burn well. Sometimes the cutting for the coming season may start as early as April. But a surprising number of Cayuá are remiss in attending to their clearing activities in sufficient time to get a good burning. Thus there are complaints of rains which came before they should have and impeded the burning, and other similar difficulties. In 1943, some *kokwé* were still being burned by October 19 while others already had beans and corn, and other plants, well above the ground.

During the agricultural months, which are, of course, the summer months, hunting is relegated by most Cayuá to occasional week-end trips. On these occasions the man may be absent for a day, or even only a half-day, roaming the woods and fields in search of game. At other times, except for an occasional morning or afternoon excursion, made perhaps when the weather is not right for work in the *kokwé*, he will not be able to find sufficient time for hunting. Moreover, a man will use some of the time not needed in agriculture in some other way, such as craft work, repairs about the house, and the like. During the winter, there is more time for hunting, but then it is often bitterly cold for the light clothing the Cayuá wear.

The first fruits ceremony, marked by the "baptism" of new corn, usually comes in late January or February, but the entire harvest, including other crops, may well run from sometime before until sometime after the baptism. This community-sanctioned harvest, however, cannot be considered the termination of all agricultural activity for the year. The plants which the Cayuá say "have no season," notably manioc and sweet potatoes, are not necessarily harvested in the usual sense. They may be left in the ground and merely dug up and used as needed. This activity in some cases continues practically throughout the year, depending only on when the crops were sown.

The Relative Importance of Agriculture, Fishing, and Hunting

While agriculture has benefited by acculturation in other ways, no large number of important new plants has been taken over. The crops aboriginally most important remain so still, but a few new plants have been adopted which are of some significance to the Cayuá. Among them are two types of sugar cane, widely grown as a delicacy and for addition (the juice) to *cāuī'*. Certain kinds of beans, rice—which is so far grown by only a few—and several garden crops have also been adopted, such as onions and garlic.

The present Cayuá allege that one of their two main varieties of corn comes from the whites (that called *aBatí tupi'*, the hard or flint type), although this is not borne out by the botanical evidence.[125] Nevertheless, Cayuá usages

[125] Cutler, 1946, p. 280.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

*177 are consistent to a certain degree with their contention. They say that the
243 gods do not approve when large quantities of flint corn are planted and smaller
quantities of the flour type, which is a divine gift. In spite of going this far,
[173] however, it is quite obvious that Cayuá now do sometimes plant more *tupi'*
than *monoti'*, intending the greater harvest largely for sale. Cutler says, "The
flour types appear to be the older form."[126] It is possible, therefore, that the
Cayuá have grafted onto some aboriginal distinction between an older and
supernaturally sanctioned flour corn (*monoti'*) and a more recent flint type
(*tupi'*) the modern rationalization that the latter is white-introduced. The
present trading association of hard corn may also have had some influence. In
any event, it is clear that some few plants have been introduced to Cayuá agri-
culture by acculturation and that the aboriginal production ratios between
one crop and another have been somewhat changed as a result of white influ-
ence.

*177 Hunting and fishing have changed less than agriculture but a few accul-
*178 turational features are to be noted. In fishing, white-introduced metal hooks
are used for angling. Machetes are now often used when hunting with dogs;
*224 clubs have presumably given way to machetes in this and have disappeared
226 altogether. Firearms are known, and a very few Cayuá possess them.[127] The
bow and arrow is the missile weapon used by the largest number, and it does
not seem to have suffered basically, either as to variety of arrow points or as to
the knowledge of its use, from acculturational change.

*177 Technologically, gathering has been largely unaffected and also probably
*178 has been little influenced by acculturational factors as to its importance in the
222 total economy. In honey-gathering the machete and axe have provided some
412 advantage over any conceivable aboriginal method. These metal implements
415 are used to cut open the trees or stumps where the wild bees make their nests.
Kerosene cans and *aguardente* (Brazilian alcoholic drink made of cane juice)
bottles are now also found convenient for catching and storing the honey.

224 Although apparently little affected by acculturation as to technology, the
226 non-agricultural forms of food production are now completely subsidiary. In
433 some respects hunting and fishing theoretically may now even be dispensable.
Practically every able-bodied Cayuá man (and woman, within the limits of
her status) is an agriculturist. But many men do very little hunting or fishing.
Even the motives for these lesser activities are now somewhat special and
include the desire for variation of activity and for relief from the largely vege-

[126] *Ibid.*

[411] [127] In 1943 only one person at Taquapiri had a firearm usable for hunting, an ancient Belgian
[648] shotgun, for which he sometimes bought powder and shot and loaded his own shells. A story was
current among the Cayuá at that time that "the Government" had issued an order for all firearms
to be taken from the Indians. Apparently certain local whites had "cooperated" in this, taking the
arms for themselves.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

table (agricultural) diet. Agriculture takes so much time that hunting has become literally somewhat of a "weekend" activity for most Cayuá men.[128]

Most of the aboriginal game animals are still taken, and southern Mato Grosso can certainly still be described as quite "wild," but game is no longer to be had in such numbers as formerly. Cayuá fishing is even less practicable than hunting, though this is not entirely a recent development. We have already seen that fishing was for a long time somewhat less important among the Cayuá than among some of the better known Tupi-Guarani. Nevertheless, it appears that modern fishing has continued to decline in importance, even from its former limited role. Fishing with poison has been given up by the Cayuá of Taquapiri, although the tradition of this practice is still alive, and even younger men said they could identify the proper poisonous plant. During our stay only a handful of men (or families) went fishing, in contrast to a majority of men who went hunting at least several times.

Many Cayuá still regularly spend some time in hunting and fishing, although the number is not as large as that of *kokwé* owners. Nor is the amount of time spent in hunting and fishing, in the majority of cases, usually more than a small fraction of that spent in agriculture. There are only one or two men in the entire village who spend more time—or even as much—in hunting and fishing than in farming. Trapping and snaring, related both to hunting and agriculture, in the sense of keeping crop pests under control, are carried on today on the whole, probably, little diminished. It may be, however, that the more elaborate and time-consuming kinds of trapping, such as making deadfalls and pitfalls for large animals, have decreased. Trapping activities continue to provide occasional meat, nevertheless, and even the Cayuá who no longer hunts is likely to keep a few traps and snares.

In fine, there can be little doubt that agriculture is relatively more important in the economy of the modern Cayuá than it was at the time of their forefathers. This is evident in at least four ways: (1) the total amount of area under cultivation; (2) the amount of work time spent in agriculture, and consequently the greater care given the *kokwé* than aboriginally; (3) the amount of total goods now produced in agriculture, both directly and indirectly (through trade); and, (4) negatively, the inroads which have been made in the former importance of hunting and fishing, and possibly gathering.

Division of Labor

The most notable feature about the present sex division of labor is the

[128] The Cayuá at Taquapiri are conscious of the Christian week and calendar and have a tendency to arrange their activities according to such a schedule. For instance, drinking fests with their attendant dancing always tend to be on Saturday nights—except for the more limited spontaneous fests. Although the Cayuá are not by any means practicing Christians, we were surprised one day, finding the men at home and not in their fields, to be told that it was a *"dia santo."*

3: Watson E-4,5 (1943) 1952 SM4 Guarani SM4

It is not clear whether any differences exist between the present and the past with respect to individual vs. joint labor in hunting and fishing. Fishing and hunting today are almost exclusively individual affairs, and at most a man will take his wife and children along on an overnight fishing trip; but this may also have been common practice formerly. In one respect alone does it appear certain that some form of joint labor prevailed with regard to aboriginal fishing; this is in the use of fish damming methods and fish poison, clearly activities requiring the cooperative labor of several individuals. The only kind of fishing referred to at Taquapiri in 1943, however, was angling, an individual occupation. The abandonment of former joint methods of fishing is presumably related somehow to the loss or weakening of other forms of joint labor. If joint fishing parties were aboriginally organized within extended families, which seems likely, a relation may well exist between the mutual decrease and abandonment of these social forms.

A certain amount of specialization, which does not appear to have existed formerly, is now present in Cayuá economy. This takes at least two different forms: craft specialization and work alternatives. Work alternatives are in the sense of whether the individual works primarily for himself or for others. Craft specialization is the less important of the two as regards the amount and importance of goods thus produced. Work alternatives are mainly concerned with the *changa*[139] relations existing between a majority of Cayuá men and local Brazilian settlers. The settlers employ these men to work—usually in their planted clearings (*roças*), employment technologically almost identical to the agriculture Cayuá know at home.

Individual craft specialization exists in both men's and women's crafts. It seems to occur in those aboriginal industries, in most cases, which have suffered a decline but whose products are still in some demand by the Cayuá, or sometimes by Neo-Brazilians as well. An example of female craft specialization today is the manufacture of hammocks, which are still widely used by the Cayuá and which also find an occasional buyer among the whites. A number of the younger women, although not all, are unable to make hammocks, or for some reason do not "wish" to do so. Hence they must obtain hammocks for their own use from a woman who can make them and who will do so for barter or for a price—infrequently the latter. The weaving of men's belts is another, although relatively unimportant, specialization among female crafts. Pottery making might also be termed in a sense a specialization, since only a few women practice it; but here is a clearcut instance of an industry that is dying because there is practically no demand for its products. To what extent the same may be true of other specialized industries, except that demand has

[139] "*Changa*" is a Brazilian regional expression, apparently with a Rio Grande do Sul provenience. In southern Mato Grosso it is widely used by the Cayuá and seems to have the meaning merely of working for hire for another—in their case almost always a Neo-Brazilian. The verb is *changar* or *changuear*.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

128 causes are largely to be recognized in the effects to which they are related and
*177 which are their expression and will thus become clear in the discussion of their
182 respective acculturational effects. Other than convenience or chance, there is no special reason for the order in which the various factors have been listed in each class. (We shall include in parentheses, each time we first mention any factor, the numeral-letter key to its location in the chart.)

PRIMARY EFFECTS OF ACCULTURATION

*177 II. A. a. "Agriculture becomes more important in the total economy of the
182 Cayuá." Several factors have contributed to this effect, and the relationship
241 is quite plain in most cases between these factors and the trend toward a larger scale agriculture. The guarantee of freedom from attack and from the need of recourse to arms (I. a.) permitted the Cayuá to devote more time to other pursuits and particularly to depend more heavily upon agriculture. A fixed source of food, of course, is a liability when retreat and destruction are in prospect. The modern Cayuá could develop and maintain their *kokwé* on a scale which would have been impossible under the necessity of being ready to abandon them hurriedly. No longer did they have to conceal them by making clearings small and inconspicuous in the forest so as to escape hostile notice.

[412] A different influence, but with much the same result, is (I. b.) the introduction of metal implements such as the machete, hoe, and axe which facilitated agriculture technologically. These implements enabled the same amount of work as before to be done better in less time—and probably with a smaller expenditure of total effort. Thus, so to speak, there was, in comparison with the past, a "surplus" of time to be used in other activities or in more extensive
• [224] agriculture. Since the most important other activities of men, hunting and
[226] fishing, were concurrently becoming less practicable, or at any rate demanding less time (as we shall see in II. A. b. below), there would obviously be a tendency to turn to the increased agricultural production of food. The heightened efficiency of the agricultural technology in turn made such a prospect less arduous.

*177 The territorial restriction of the Cayuá and their final location upon rela-
182 tively small reservations (I. c.), of course, favored agriculture; it became
241 necessary to curtail economic activities, such as hunting and fishing, that de-
621 pended upon greater mobility and a wider territory of exploitation. Agriculture remained practically the only possible direction in which Cayuá could compensate for their consequent economic losses. In a sense, then, we see here the reverse of the presumably usual relation between sedentarism and intensive agriculture. Generally sedentarism comes about "naturally," one supposes, but in the Cayuá case it was increased and enforced politically from outside. Thus, instead of resulting from intensive agriculture, the fixation of territory tended rather to bring that intensification about.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

A consolidating factor, (I. g.) the development of an external market for small quantities of agricultural produce, is probably the most recent step to date in the increasing scale of agriculture. Even without trade, agriculture would likely have come to be practiced on nearly as large a scale as at the present time. Being able to trade small amounts of their corn and beans, and a few other crops, to the whites for white goods has merely further established the feasibility of agriculture as an adjustment to the new conditions the Cayuá face. Certain aspects of their culture other than farming may conceivably diminish through the gradual inculcation of Neo-Brazilian values in coming generations of Cayuá. Agriculture, however, at least as long as the present situation prevails, will be favored and enhanced by the very factors of acculturation.

Three other factors have aided the growth of Cayuá agriculture to a lesser degree, or indirectly. The decrease in game animals in the Cayuá region (I. d.) has had the effect of making agriculture as a source of daily bread somewhat more important through the consequent decline of hunting. The introduction of trade goods and of trading posts (I. e.) has tended further to establish the importance of agriculture. The Cayuá now know and desire trade goods, and one means of satisfying the desire is through trading agricultural produce for these goods. The development of an external market for Cayuá (male) labor, (I. g.), has perhaps also had some effect in solidifying Cayuá agriculture (though in some respects it has competed with agriculture). The type of work for which Neo-Brazilians employ Cayuá men in *changa* is usually agricultural. Moreover, it is specifically the same type of agriculture as that practiced by the Cayuá themselves. As far as operations, at least, are concerned, wage-work provides little or no alternative or change from own production and may have the reinforcing effect suggested.

II. A. b. "Hunting and gathering activities decrease in importance in the total economy." One acculturational cause of the decline of hunting and gathering activities has been (I. c.), the gradual and increasing territorial restriction of the Cayuá and their ultimate settlement on small reservations. Possibly this restriction was not drastic for settlement, as the Cayuá aboriginally were somewhat sedentary and built fairly substantial shelters that must have tended to confine their range. But nowadays, with legally defined possession of lands, it is not so easy as formerly to traverse the countryside for hunting and gathering without trespassing on the property of white settlers who object. The Cayuá reservations, furthermore—or at least those of some groups—are not near principal watercourses where there is access to canoe travel. Hence the people can no longer participate in such hunting and fishing activity as former mobility with the canoe presumably permitted.

The second main cause of decrease in hunting and fishing is (I. d.), the reduction of the aboriginal supply of game animals. This has occurred because of

5: Métraux E-4 (no date) 1948 SM4 Guarani SM4

eat in times of want. They also gather the fruits of other palms, such as *Acrocomia mokayayba*, *A. totai*, *Cocos yatay*, *Attalea*, and of several trees and other plants, including *Carica*, *Annona*, araza, ihwa-imbé (*Philodendron bipinnatifidum*), mburucudyà (*Passiflora edulis*), wild oranges, etc.

The *Caingud* relish honey, which is for them an important food resource. The *Apapocuva* have taken the first steps toward domesticating bees. When they gather honey, they spare several combs so that the bees can return to the same place another time. They also acclimatize swarms of bees to their villages. The fat of butterfly larvae (Phalaenidae and Morphidae) and of beetles (tambú, *Calandra palmarum*[2]) is part of *Caingud* diet. They fell some trees for the purpose of developing the larvae in the decayed wood.

Hunting.—Because the *Caingud* prefer meat to any other food, their main concern when they move their village is to choose an area with abundant game. They make great use of traps. These are of two types: dead falls, which crush the game; and spring snares with automatic release, for birds and even for large quadrupeds, like tapir or deer. Traps and pitfalls are often located at places where animals enter fenced fields. The *Caingud* capture parrots in a noose at the end of a pole. They have dogs trained for hunting, especially for jaguars.

Lower jaws of jaguars are kept as trophies suspended in front of huts.

Fishing.—Fishing is of secondary importance. It is reported that the ancient *Guaraní* angled with wooden hooks; those living on the Coast used tucumã fiber nets. Although modern *Guaraní* are well provided with iron hooks, they still shoot fish with bows and arrows, force them into baskets placed in the openings of stone dams, or poison them in calm water with the juice of a Sapindaceae (Vogt, 1904, p. 204).

Domesticated animals.—The only domesticated animal in pre-Columbian times was the Muscovy duck. Today they have dogs, chickens, and many other European farm animals.

Cooking.—The food of the rural population of Paraguay is largely a heritage of the ancient *Guaraní*. The most popular dishes prepared with maize are chipas—cakes made of maize flour—mbai puy, maize mush, abati pororo, boiled maize, and guaimi atucupé—maize dough wrapped in leaves and cooked under the ashes. The *Caingud* have about 12 recipes for preparing maize. Maize flour baked in a green bamboo joint is a *Caingud* specialty.

Manioc tubers are generally boiled or roasted. They are also sliced, dried in the sun, and pounded into a flour with which the *Caingud* make wafers. Flour for wafers is also prepared by the *Caingud* with tubers soaked in water or mud for 8 days, and then dried in the sun and ground. Manioc starch is also extracted by grating the tubers—today on a tin grater—and washing the mass in water.

[2] *Rhynchophorus* sp., according to Strelnichov.

6: Watson E-4,5 (1943) 1945 SM4 Guarani SM4
Cayua

the village of Taquapiry, a relatively closely grouped settlement of Cayuá, number about 175, including men, women, and children. To a certain extent, Taquapiry was atypical of what we had observed for some Cayuá elsewhere in that it was a group of houses built in relative proximity one to another, without much of the frequently encountered scattering of small kin groups in the forest. There were, however, some evidences of the tendency to live apart, representing, possibly, some of the more "traditionally minded" individuals of the group. Present-day Cayuá are sedentary and live in rough houses, many of which, in Taquapiry, house only elementary family groups.

The present Cayuá are primarily agricultural. Almost every adult male in the village has a *roça*,[8] or field, for planting, which is cut out of the forest by what can be generally described as slash-and-burn methods. A man need not be married before he possess a *roça*, and even some women carry on with their husband's *roça* after being widowed or divorced. But, generally speaking, *roças* are today associated with elementary families, for whom they serve as the principal means of obtaining a living.

A certain number of Cayuá still spend some time in hunting and fishing, although the number would not be as large as that of *roça* owners. Nor is the amount of time spent in hunting and fishing, in the majority of cases, usually more than a small fraction of that spent in agriculture. Hunting and fishing require considerable time, at least a day for even a small-scale hunt and two days and often more for fishing. The game resources of the immediate neighborhood of Taquapiry are not extensive, and no fish-bearing streams are to be found less than a half-day's distance from the *aldeia*. There are probably not more than one or two men in the village who spend more time in hunting and fishing than in agriculture.

Trapping and snaring, with the dual purpose of providing occasional meat and keeping agricultural pests under control, are engaged in to some extent by nearly all Cayuá males, whether or not they also hunt and fish. Trapping and snaring are somewhat distinct from "true" hunting and fishing in the Cayuá instance; they do not call for departure from regular agricultural activity. The provident

[8] A Brazilian word referring to the notably similar complex of agricultural traits among rural Brazilians.

6: Watson E-4,5 (1943) 1945 SM4 Guarani SM4
Cayua

224
226 Cayuá sets traps and snares in and about his *roça* to catch beasts which are preying on the crops.

464 A type of economic activity now quite important in a good num-
648 ber of cases is that which the Cayuá call by the southern Brazilian colloquialism, *changuear* or *changar*, which means to hire oneself out to another for payment in money or in kind — in effect, a sort of peonage. This is the strongest point of economic contact of the Cayuá of Taquapiry with the neighboring whites, for many of whom the Indians work for several weeks or even months out of a year, making *roças* or in the production of *herva mate* (Ilex paraguayensis). (Mate is one of the most important and characteristic products of the region for the Brazilian inhabitants.) Peonage is somewhat seasonal and occasional for most of the Cayuá, although a few men manage to spend rather extended periods of time away from the village during many parts of the year. Although perhaps fewer individuals work for whites than hunt and fish, as a rule more time is spent in such service by those who work this way than is spent in hunting and fishing. A large number of individuals practically never serve as peons, however, and others do such work only very irregularly. Peon-
[465] age is probably the most direct and obvious way of getting those things for which the Cayuá have come to depend upon the whites, knives and machetes, cloth and thread, salt, soap, iron pots, cooking
439 grease, meat, hats, etc. There is very little demand for the products of the Indians themselves, other than for their mere labor, and in
648 such crude and unorganized markets as can be said to exist for the sale of Indian products the Cayuá almost inevitably come off second best at the hands of their white neighbors.

462 The most important parts of the woman's role in Cayuá economy, beyond her ubiquitous household tasks of cooking, cleaning, and tending children and chickens, are those related to agricultural activ-
[482] ities. Woman is the burden-bearer *par excellence* of the Cayuá. The female, through the use of a tumpline carrying basket, constitutes the transportation system of Cayuá economy. The Cayuá woman
[241] also assists at many important points in the actual production of food in the *roça*, and can, as far as the division of labor goes, in the case of a widow or a divorcée, do almost any work except the heaviest of agricultural labor. This latter situation is not very frequent, however, and merely serves to show the range of the female economic role

6: Watson E-4,5 (1943) 1945 SM4 Guarani SM4 Cayua

Loss of Hunting and Fishing Facilities

Mate exploitation in the area and the increasing presence of white settlers, among other things, probably led to a decrease in the supply of game, at least of the larger species. To some extent, the animals which play any important part in the diet of the Cayuá of today are those which do not interest the whites because they are not considered particularly desirable or fit for eating. In Taquapiry, at least, fishing also has probably suffered from increasing sedentarism. The only fish afforded by the little streams in the immediate vicinity of this particular settlement are tiny, minnow-like creatures which, although they are occasionally eaten, could not play an important role in the diet. To reach bodies of water with sizable fish it is necessary to make at least a good half-day's foot journey or more. Even then, the results frequently do not seem to justify the effort of the journey. For the men of present-day Taquapiry, there are only two alternatives. If one wishes to depend largely upon fish and game — as one or two individuals do — he must almost do without a *roça* since it is necessary to spend a great deal of time in producing even moderate hunting and fishing results. Actually, the few men at Taquapiry who do spend an important part of their time hunting and fishing are able to do so only because they belong to production-consumption groups other members of which produce agricultural food. For the Cayuá man whose major activity is agriculture, fishing and hunting are largely limited to Saturdays and Sundays.

Although it is still known by tradition, *timbó*-fishing is not practiced today at Taquapiry.[24] No reason could be given by informants

this reason have been diverted from their preferred routes, in the regions which were traversed by whites, and hence, as a result, from their use of the canoe.

[24] The *timbó* formerly used by the Cayuá is said to be a large, jointed liana. The juice, of course, is poisonous to fish. Formerly, groups of men — for it was necessary to have at least several for the job — would cut the required *timbó* from the forest and go to the bank of a likely stream or back water. The *timbó* had to be pounded and beaten with sticks and rocks so that its juice would run down to the water, or the crushed trunks themselves put in the water to poison it. The catch by this method is believed by present-day Cayuá to have been large enough, generally, to satisfy the requirements of all those who participated in the party and among whom the fish taken were stated to have been divided.